



Session 1

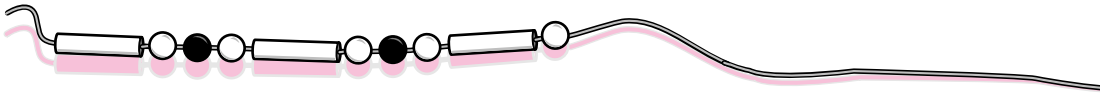


Missouri History Day

Directions

Numbers 1 through 6 are about Missouri History Day. You and your classmates will go to a museum to be a part of the celebration. Show all of your work and write your answers directly in this booklet.

- 1 At the first display you see Native American beads. Look at the pattern of the beads. Draw the next 3 beads in the pattern on the string.



Go On

2

The next display shows a map of some cities in Missouri.

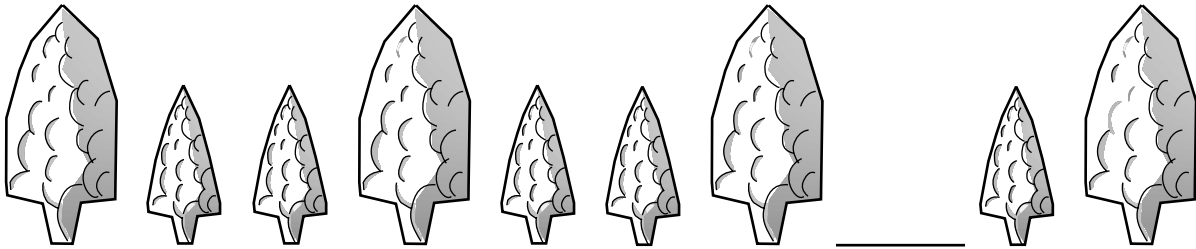


Use the map above to find the number of miles from St. Louis to Independence. Show your work in the box below and write your answer on the line.

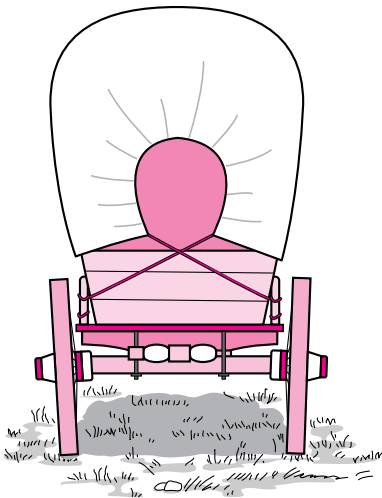
_____ miles

Go On

- 3** You see this pattern of large and small arrowheads at the museum. One of the arrowheads is missing.



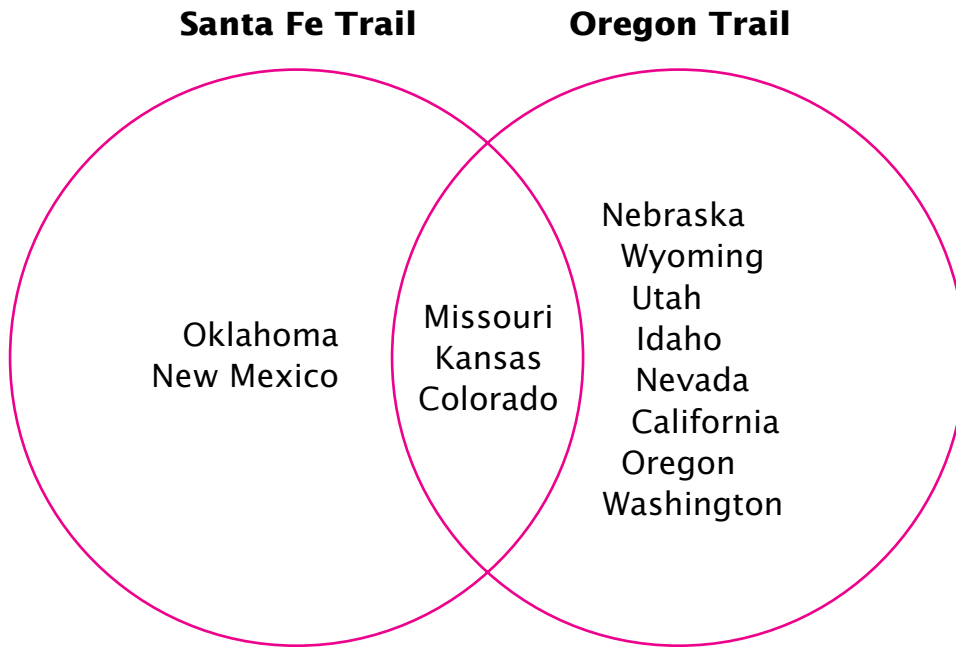
In the box below, describe the size of the arrowhead that is missing.



Go On

4

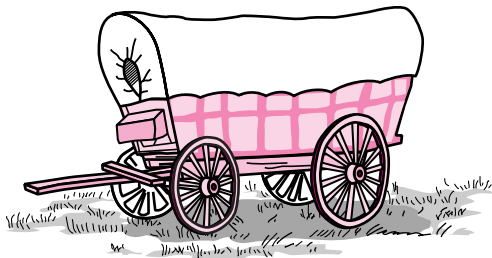
At another display you learn that both the Santa Fe Trail and the Oregon Trail started from Independence, Missouri. The Venn diagram below shows the states each trail traveled through.



On the lines below, write the names of two states that **both** trails traveled through.

1) _____

2) _____



Go On

Directions

The table shows the number of people who visited the museum last summer. Use the table below to do Numbers 5 and 6.

MUSEUM VISITORS

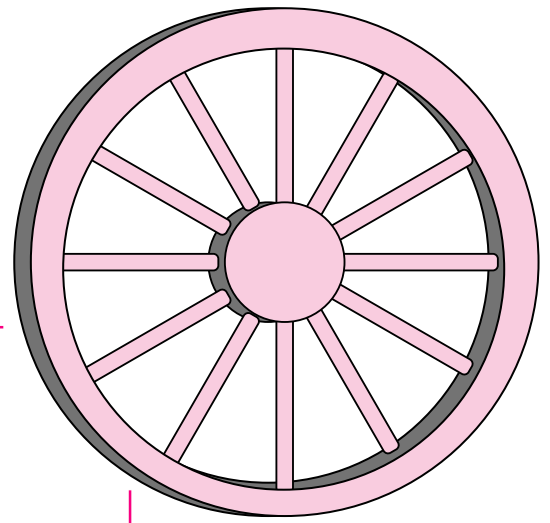
Month	Number of Visitors
May	1,264
June	1,290
July	927
August	875

- 5** In which month did the museum have the *greatest* number of visitors?

Go On

6

How many more people visited the museum in the month of May than in the month of August? Show your work in the box below and write your answer on the line.



A large empty rectangular box for showing work.

_____ people

Go On

MATH HELPERS

Directions

Numbers 7 through 12 are about your class's new program called Math Helpers. Each Math Helper will help other students with math lessons. Show all of your work and write your answers directly in this booklet.

- 7** You are chosen to be a Math Helper. Bill was absent on the day the class started learning about fractions. He was puzzled when the teacher wrote $\frac{3}{4}$ on the chalkboard.

$$\frac{3}{4}$$

In the box above, draw a picture to show Bill the fraction $\frac{3}{4}$. Then explain to Bill *why* your picture shows the fraction $\frac{3}{4}$.

Go On

8

You and Kip are working on the number pattern below. Write the numbers that will come next in the pattern on the lines below.

7770 6660 5550 4440 _____ _____

Go On

9



Use your pattern blocks to help you solve this problem.

A student asks you for help with angles. In the box below, trace around a pattern block that has exactly 3 angles.



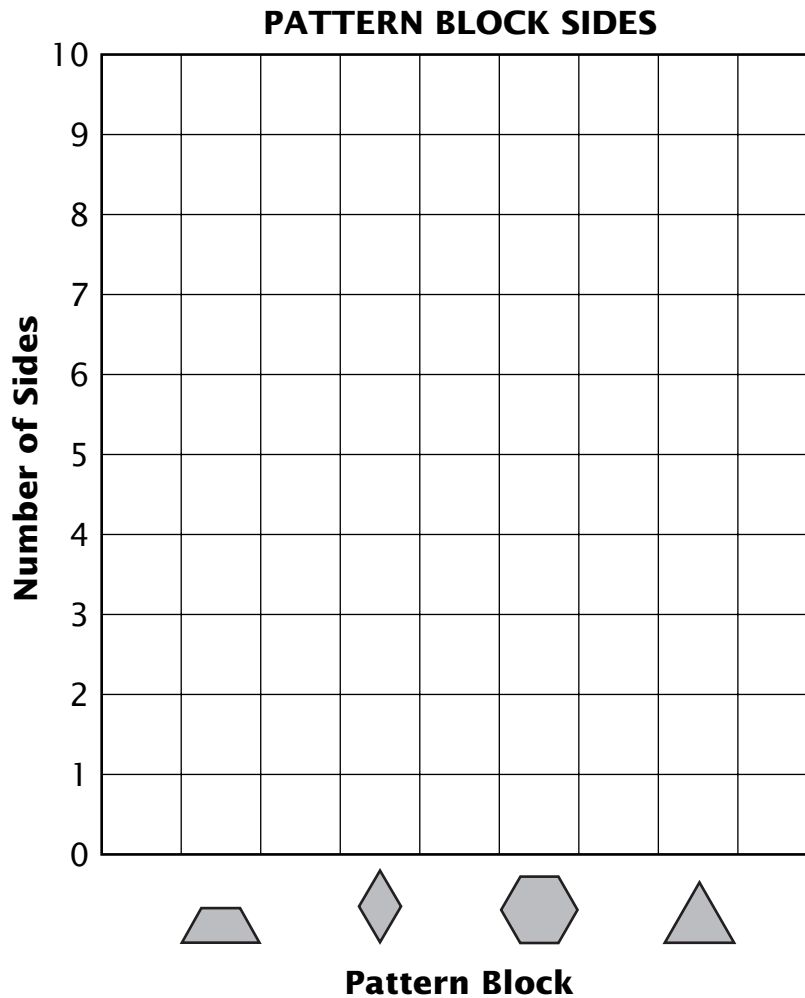
Now trace around a pattern block that has exactly 4 angles.



Go On

10

You start the graph below with a group of students. You want to show the number of sides for each pattern block pictured along the bottom of the graph.



Draw bars on the graph to show the number of sides for each pattern block.

- 11** You help Charlie find the missing numbers in the Input/Output table. Complete the table below.

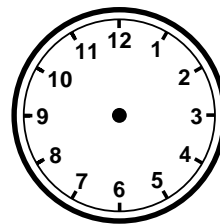
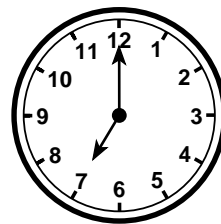
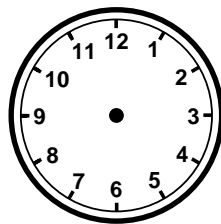
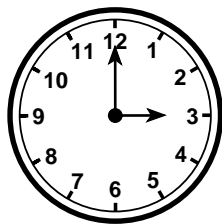
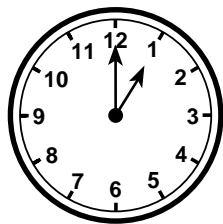
Input	Output
4	1
7	4
10	7
13	
16	
19	

In the box below, write the rule you used to find each output number.

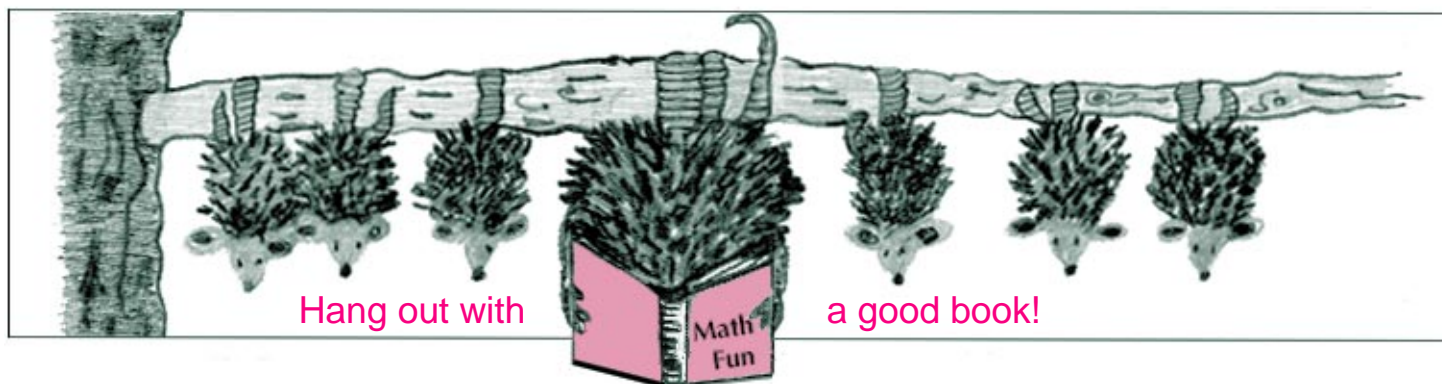
Go On

12

You and Theresa find a pattern in the row of clock faces shown below. Draw hands on the *two* blank clocks to complete the pattern.

***Go On***

Session 2



BOOKMARK

Directions

Show all of your work and write your answers directly in this booklet.

1



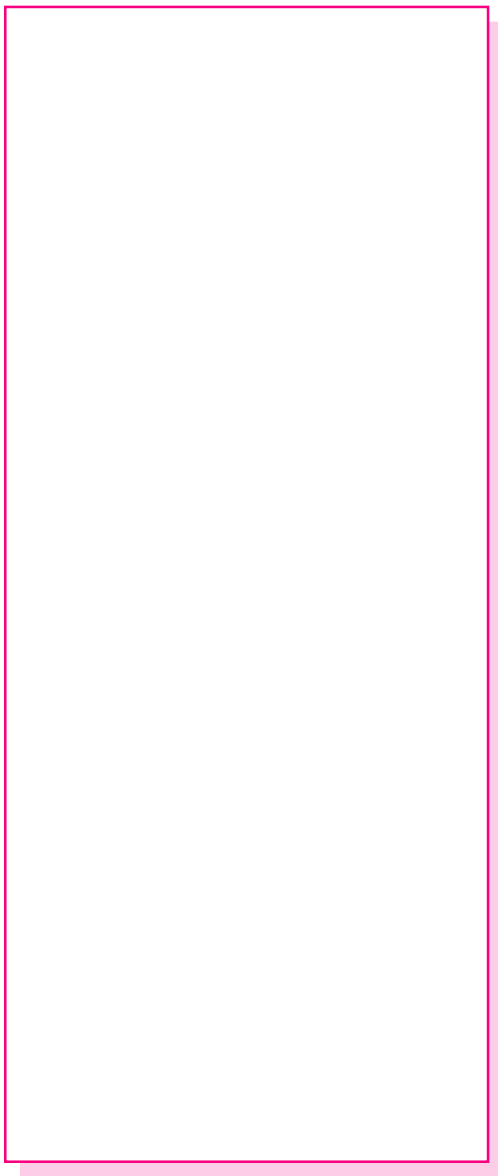
Use your pattern blocks to help you solve this problem.

It is time for the Math Fair! Each student who visits the geometry display will be given a bookmark. You have been asked to help create a design for the bookmark.

- On the next page, create a symmetrical design on the bookmark by tracing around **at least** 3 different pattern block shapes. Each shape may be used more than one time.
- Draw the line of symmetry on your bookmark.

Go On

Use this page to create a symmetrical design on your bookmark.

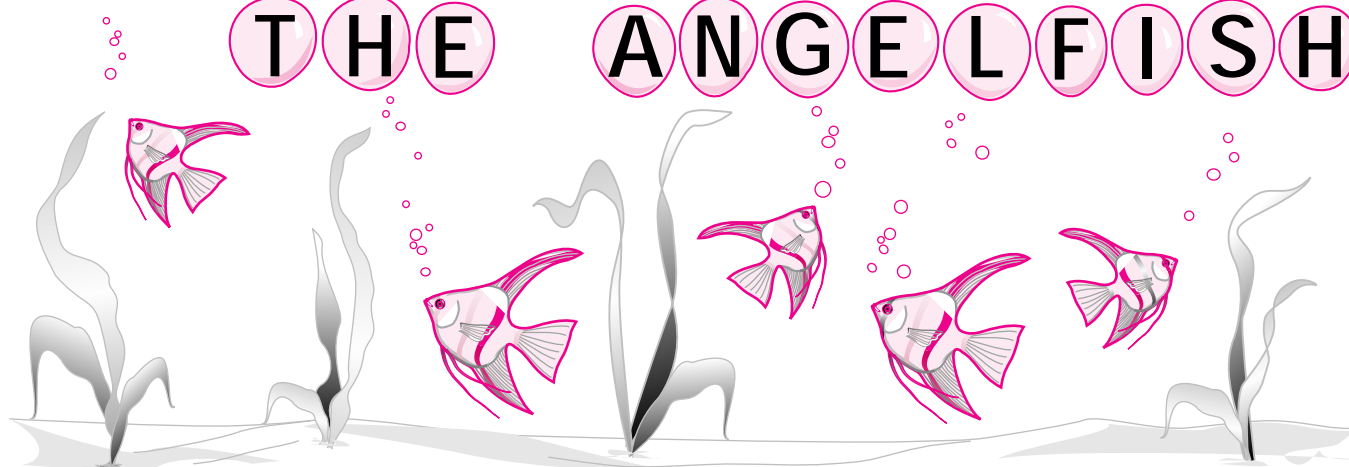


In the box below, explain how you know the design on your bookmark is symmetrical.

Go On

AL AND

THE ANGELFISH



Directions

Al is learning about angelfish. Numbers 2 through 5 are about angelfish. Show all of your work and write your answers directly in this booklet.

2



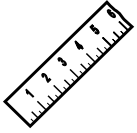
Use your coins to help you solve this problem.

Al is saving money to buy angelfish. He has saved 5 quarters, 2 dimes, 4 nickels, and 5 pennies. How much money has Al saved *in all*? Show your work in the box below. Write your answer on the line.

\$ _____

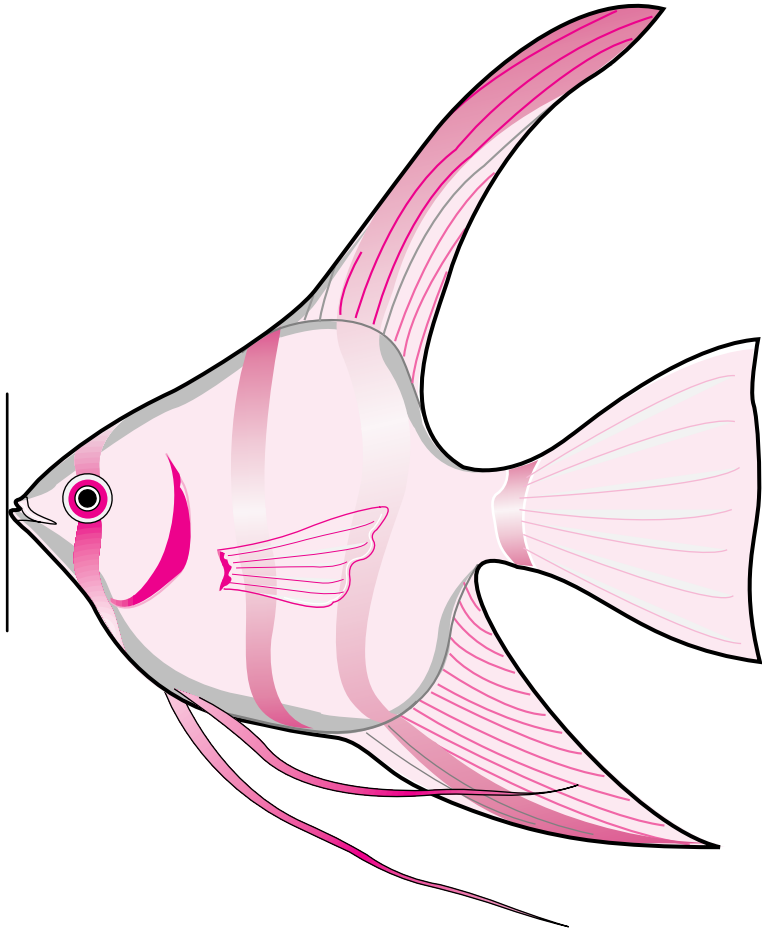
Go On

3



Use the centimeter side of your ruler to help you solve this problem.

Al finds the largest angelfish in the tank at a pet store. Measure the length of the fish below to the nearest centimeter (cm).



How long is the angelfish?

_____ cm

Go On

- 4** A customer at the pet store buys 11 fish. Al notices that 8 of the fish are gold and 3 are black. The customer puts a net in the bag to catch 1 fish.

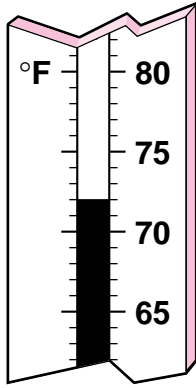


What is the probability that the customer will catch a black fish in the net?

5

Al learned that a safe water temperature for angelfish is between 75° and 86° Fahrenheit (°F).

What is the temperature on the Fahrenheit thermometer shown below? Write your answer on the line.



_____ °F

Explain why the water temperature shown on the thermometer *is* or *is not* a safe temperature for angelfish.

A large empty rectangular box with a pink border, intended for the student to write their explanation.

Go On



Library Day

Directions

Numbers 6 through 9 are about a visit to the school library. Show all of your work and write your answers directly in this booklet.

- 6** The librarian read three books written by Barbara Cooney to the class. Each student voted once for their favorite story. The results are shown in the tally chart below.

CLASS TALLY CHART

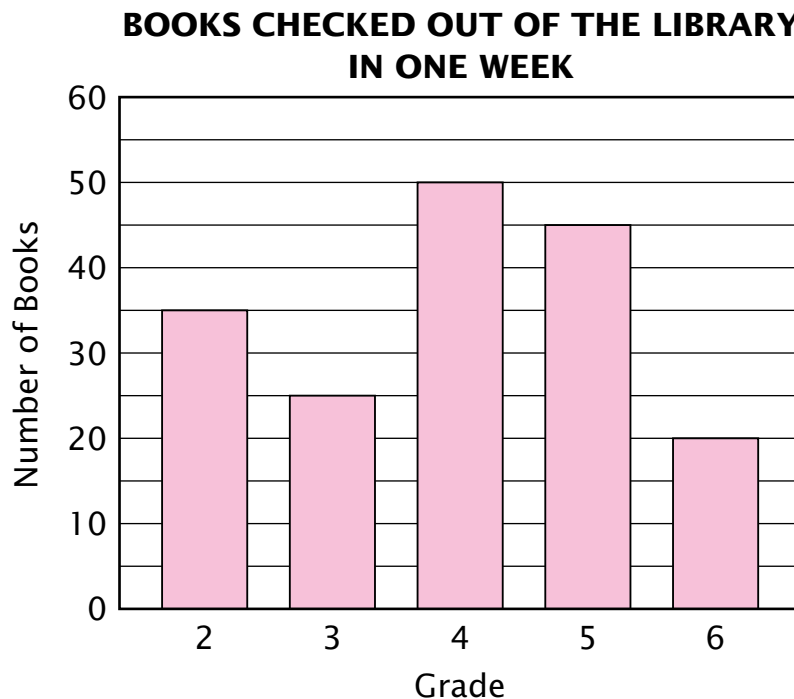
Book	Votes
<i>Island Boy</i>	
<i>Miss Rumphius</i>	
<i>Hattie and the Wild Waves</i>	

In the box below, write a mathematics story problem using information from the tally chart. Ask a question at the end of your story problem. Then solve the problem.

Go On

Directions

This graph shows the number of books that were checked out of the library in one week by each grade. Study the bar graph below. Then do Numbers 7 and 8.



- 7** After the graph was made, 15 **more** books were checked out by Grade 6 students.

On the graph above, correct the bar to show the total number of books checked out by Grade 6 students.

How many books **in all** were checked out by Grade 6 students?

_____ books

- 8** How many **more** books were checked out by students in Grade 5 than by students in Grade 3 ?

_____ books

Go On

- 9** For every 8 pages Eli reads, a star is added to his reading chart. Complete the number sentence below to show the number of stars Eli will have after reading 56 pages of his book.

$$8 \times \square = 56$$

In the box below, show how you found your answer.

